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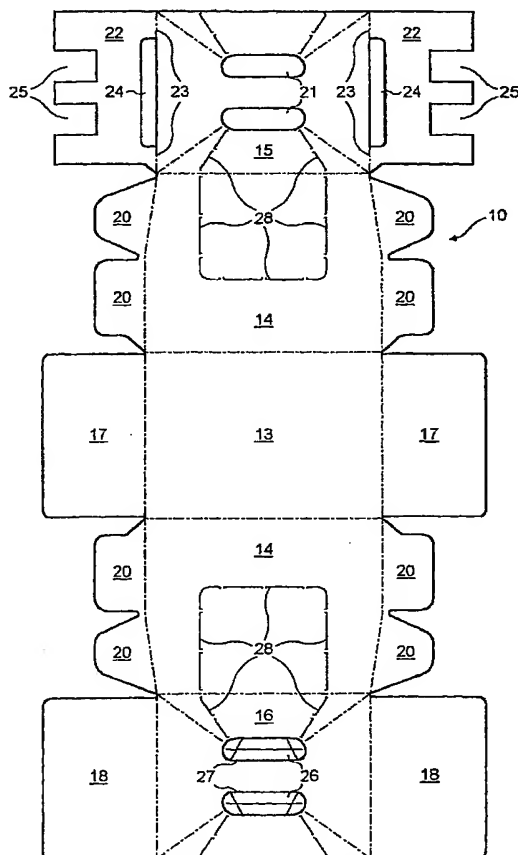
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[Continued on next page]

(54) Title: DISPOSITIF DE POIGNEE POUR UN EMBALLAGE EN CARTON



(57) Abstract: Cette invention concerne un emballage en carton formé à partir d'une ébauche (19). L'ébauche comporte un premier et un deuxième panneaux supérieurs (15, 16). Le premier panneau supérieur (15) présente des rainures en guise de poignée (21) et aussi des panneaux supérieurs secondaires (22) connectés de manière articulée à des bordures extrêmes opposées. Les panneaux supérieurs secondaires (22) sont pliés contre et assujettis par voie d'adhésion à la partie supérieure du premier panneau supérieur (15). Le deuxième panneau supérieur (16), une fois l'emballage en carton plié, est ensuite assujetti par voie d'adhésion à la partie supérieure des panneaux supérieurs secondaires (22) en formant un panneau de dessus renforcé utilisant des surfaces en carton qui seraient gaspillées autrement.

WO 01/66434 A1



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

HANDLE ARRANGEMENT FOR A CARTON

This invention relates to a carton having a handle.

According to the present invention there is provided a paperboard carton having a base, first and second side panels hingedly connected to opposite side edges of the base, first and second top panels hingedly connected to the first and second side panels respectively, one or more parts of said first top panel defining handle means and the first top panel having secondary end panels hingedly connected thereto wherein the secondary end panels are folded against and adhesively secured to the first top panel and the second top panel overlies the first top panel and secondary end panels combination and is adhesively secured thereto, said second top panel enabling access to the handle means of the first top panel.

Preferably said one or more parts of said first top panel comprise one or more openings and said secondary end panels have cooperating cut-away portions. Ideally said one or more parts comprise a pair of spaced, lengthwise extending slots. In preferred arrangements the second top panel has apertures which overlie said slots and the secondary end panels are shaped so as to keep the slots exposed when secured to the first top panel.

It is a preferred feature that the hinge connections between the secondary end panels and the first top panel incorporate relieved areas. Conveniently each hinge connection comprises two spaced hinge portions located adjacent respective side edges of the first top panel.

In preferred embodiments, base end panels and top end panels are hingedly connected to the base and second top panels respectively and the first and second side panels have at each of their lengthwise edges end panels hingedly connected thereto, the base and top end panels overlying the side end panels at each end and being adhesively secured thereto and to each other. Normally the secondary end panels are adhesively secured to the top of the first top

panel and the second top panel is adhesively secured to the secondary end panels.

Embodiments of the present invention will now be described in more detail. The description makes reference to the accompanying drawings in which:

Figure 1 shows a blank for producing a carton according to the present invention,

Figure 2 shows the figure 1 blank in an early stage of assembly, and

Figure 3 is a perspective view of an assembled carton without tapering side walls.

In figures 1 to 3 there is shown a blank 10 which when constructed forms a carton 11 for a plurality of articles such as bottles (not shown). In this embodiment twelve bottles are to be contained in three rows of four bottles but the blank could easily be adapted for any number of bottles, cans or other articles.

The blank 10 has a base 13, side panels 14 hingedly connected thereto and first and second top panels 15, 16 hingedly connected to respective opposite side panels 14. The hinge connections could be by simple fold lines, partially cut fold lines or other suitable means. The base 13 has base end panels 17 which in use are folded up and the second top panel 16 has hingedly connected top end panels 18, which when assembled are folded down. Hingedly connected to the side panels 14 are end closure panels 20 which are folded inwardly and are adhesively secured to the end panels 17, 18 so as to fully enclose the ends of the carton 11.

The first top panel 15 incorporates a pair of spaced slots 21 which define handle means. The slots 21 are located such that the handle means is located centrally between the two side panels 14. At each end of the

between the hinges 23 is relieved to facilitate folding of the hinges 23. The secondary end panels 22 have cut-away portions 25 which cooperate with the slots 21 in the first top panel when the panels are folded together.

The second top panel 16 has push-in flaps 26 hingedly connected at 27. When the flaps are pushed in, apertures are formed.

Lines of weakening 28 are provided in the first and second top panels 15, 16 and in the side panels 14 and where the top panels 15, 16 overlap the lines of weakening 28 are aligned. The lines of weakening 28 allow the consumer to open the carton with ease so as to gain access to the contents of the carton. Other configurations are of course possible for the lines of weakening and they could also be omitted on one or both sides of the handle if desired.

Assembly of the carton 11 is as follows. The secondary end panels 22 are glued and folded on to the top of the first top panel 15. The twelve bottles in this instance are positioned on the base 13 and the side walls 14 are folded up. The first top panel 15 and secondary end panels 22 are folded over the tops of the bottles and adhesive is applied to areas 29 of the secondary top panels 22 as shown in figure 2. The second top panel 16 is then folded over and adhered to the secondary end panels such that the flaps 26 overlie the cut-away portions 25.

The end closure flaps 20 are folded inwardly, the base end panel 17 is folded upwardly to be secured to the lower end closure flaps 20, and the top end panels 18 are then folded to be secured to the base end panel and upper end closure flaps 20 so as to close off the ends of the carton which is thus fully enclosed.

To pick up the carton 11, the flaps 26 are pushed in through the aligned cut-away portions 25 and slots 21 and can be folded under the area between the slots 21. The secondary end panels 22 provide

reinforcement for the top of the carton 11, but are formed from an area of paperboard which would normally be wasted.

The carton could of course be varied in a number of ways such as size and shape of the carton, handle, areas of weakening.

Claims

1. A paperboard carton having a base, first and second side panels hingedly connected to opposite side edges of the base, first and second top panels hingedly connected to the first and second side panels respectively, one or more parts of said first top panel defining handle means and the first top panel having secondary end panels hingedly connected thereto wherein the secondary end panels are folded against and adhesively secured to the first top panel and the second top panel overlies the first top panel and secondary end panels combination and is adhesively secured thereto, said second top panel enabling access to the handle means of the first top panel.
2. A carton as claimed in claim 1 wherein said one or more parts of said first top panel comprise one or more openings and said secondary end panels have cooperating cut-away portions.
3. A carton as claimed in claim 2 wherein said one or more parts comprise a pair of spaced, lengthwise extending slots.
4. A carton as claimed in claim 3 wherein the second top panel has apertures which overlie said slots and the secondary end panels are shaped so as to keep the slots exposed when secured to the first top panel.
5. A carton as claimed in any one of claims 1 to 4 wherein the hinge connections between the secondary end panels and the first top panel incorporate relieved areas.

6. A carton as claimed in any one of claims 1 to 5 wherein each hinge connection comprises two spaced hinge portions located adjacent respective side edges of the first top panel.
7. A carton as claimed in any one of claims 1 to 6 wherein base end panels and top end panels are hingedly connected to the base end second top panels respectively and the first and second side panels have at each of their lengthwise edges end panels hingedly connected thereto, the base and top end panels overlying the side end panels at each end and being adhesively secured thereto and to each other.
8. A carton as claimed in claim 7 wherein the secondary end panels are adhesively secured to the top of the first top panel and the second top panel is adhesively secured to the secondary end panels.
9. A paperboard blank for producing a carton as claimed in any one of claims 1 to 8.

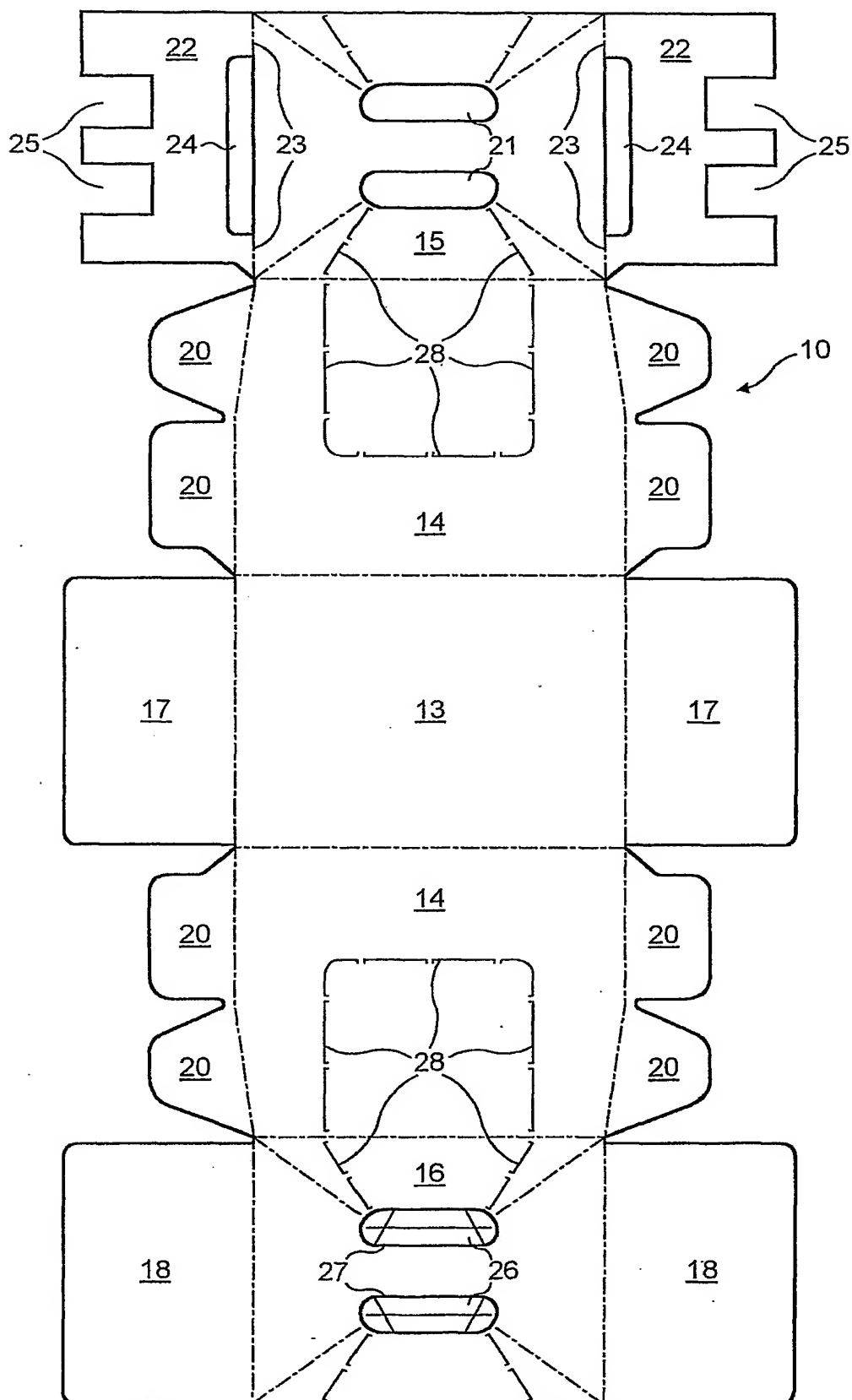


FIG. 1

SUBSTITUTE SHEET (RULE 26)

2 / 3

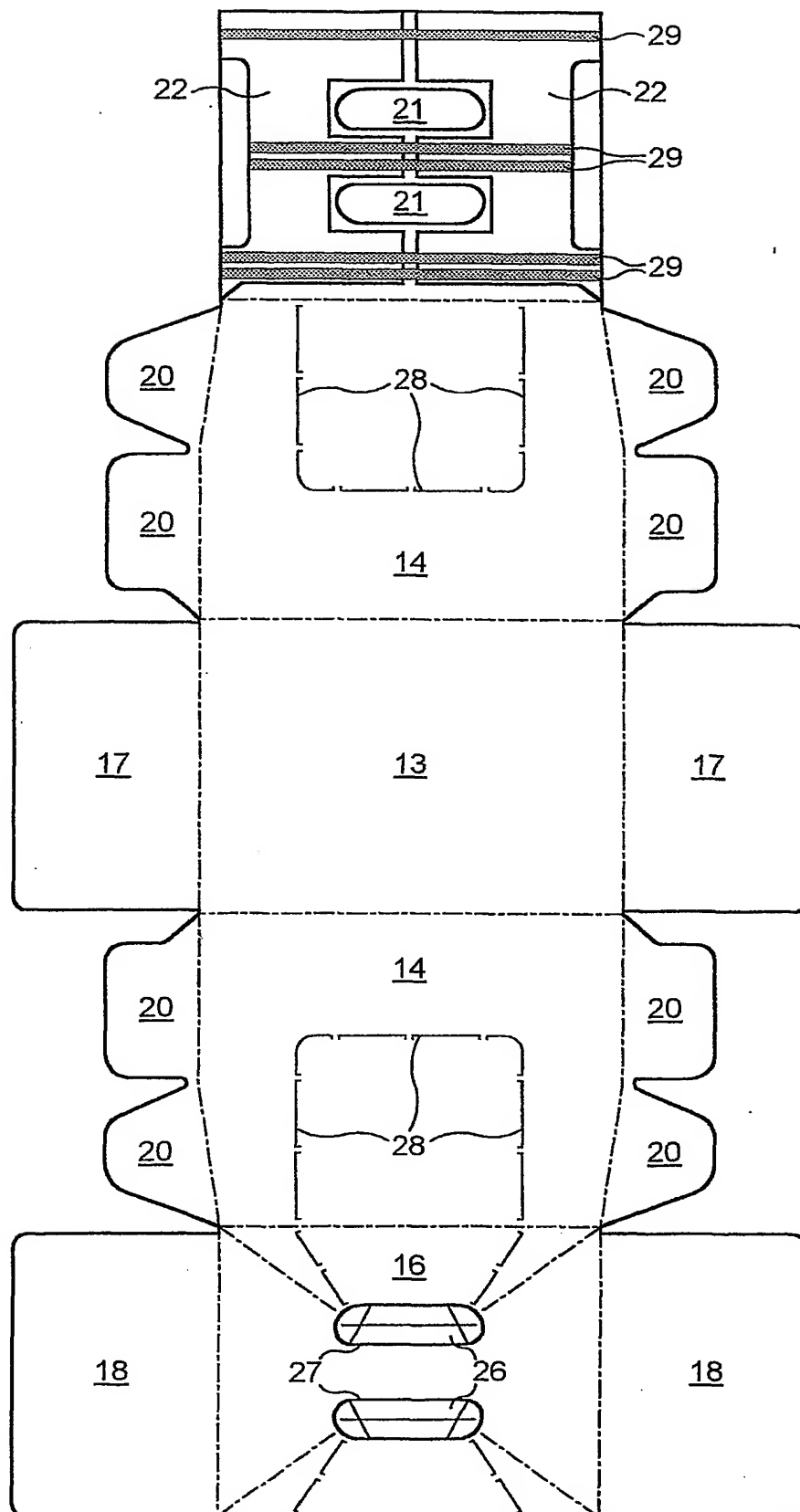


FIG. 2

SUBSTITUTE SHEET (RULE 26)

3 / 3

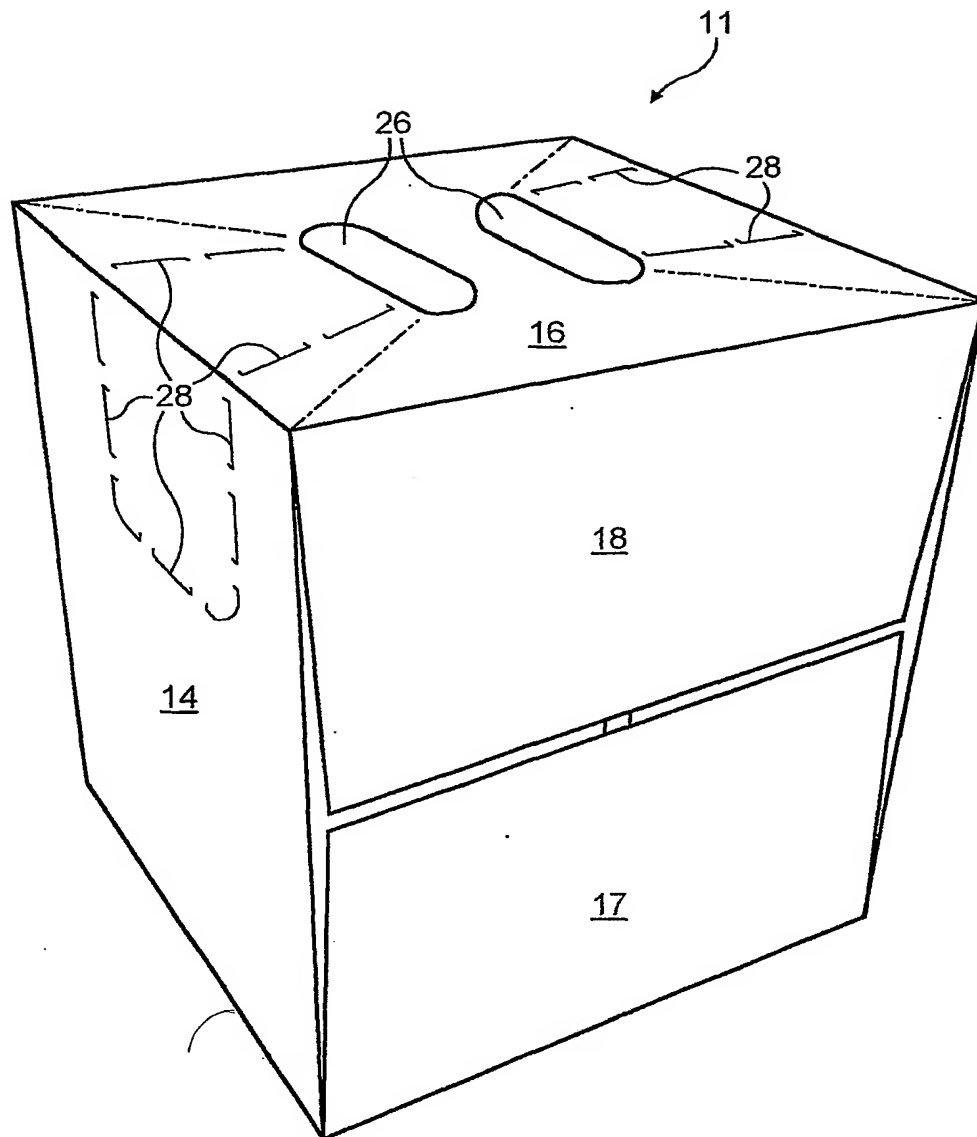


FIG. 3

INTERNATIONAL SEARCH REPORT

National Application No
PCT/GB 01/00841A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B65D71/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 296 13 814 U (EUROPA CARTON FALTSCHACHTEL) 24 October 1996 (1996-10-24) the whole document	1,7-9
A	US 2 372 351 A (ARNESON) 27 March 1945 (1945-03-27) page 1, right-hand column, line 40 -page 2, left-hand column, line 11; figures 1,2	1-4
A	WO 98 19932 A (LE BRAS) 14 May 1998 (1998-05-14) abstract; figures	1-4,6
A	WO 96 21604 A (THE MEAD CORP.) 18 July 1996 (1996-07-18) the whole document	1,5



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

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P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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Patent document cited in search report		Publication date	Patent family member(s)		Publication date
DE 29613814	U	24-10-1996	NL	1006501 C	12-02-1998
US 2372351	A	27-03-1945	NONE		
WO 9819932	A	14-05-1998	AU	4999097 A	29-05-1998
			EP	0935568 A	18-08-1999
			ZA	9709773 A	29-07-1998
WO 9621604	A	18-07-1996	AU	4698496 A	31-07-1996
			CA	2209111 A	18-07-1996